# *SECTION 8: Implementation*

## The Need for an Implementation Process

This plan does not prescribe actions that specific stakeholders must implement. That would require additional research and much more community involvement. At this point all sectors of the community—City government, including individual agencies; businesses; institutions, particularly the universities; and individuals—need to become engaged in the process of making a commitment to carrying out the effort to reduce Cambridge's GHG emissions. For us to reach our 20% reduction target, all sectors of the community will need to embrace the goal and develop actions to attain it.

*Developing a community consensus on the need to reduce GHG emissions and gaining active participation by stakeholders are feasible for the following reasons:*

- Climate change will directly affect Cambridge.
- The actions needed to reduce the buildup of greenhouse gases have many additional benefits, including increased energy reliability and security, cost savings, cleaner air and water, and a higher quality of life.
- Opportunities exist for economic development and job creation.
- Many resources are already available to support actions that reduce GHG emissions.
- Actions to reduce GHG emissions are already taking place in Cambridge.

## Environmental Justice Considerations

While opportunities to counter climate change abound, there is a range of choices in the actions to be taken, and some may have different impacts on different social groups. To ensure equity and to sustain community support for the actions, it is important to give attention to the possibility of unintended effects. For example, energy efficiency upgrades in a building may involve initial costs that are recouped over time. Lower-income households may not be able to afford to make the initial investment.

To protect against inequitable outcomes, the implementation process should endeavor to be inclusive and provide for genuine dialog. Reaching out to a wide segment of the community and conducting the process openly will foster better ideas, greater commitment, and more effective action. For example, identifying obstacles that low-income households face in implementing energy efficiency measures can and should lead to solutions.

## Strategies

A community-wide outreach campaign is a very large undertaking. To be successful a campaign must be able to marshal resources and build community support. It makes sense to start with projects that have tangible goals and will generate positive results that can build upon one another. The elements of the implementation process should include the following:

- Use City leadership by example to help catalyze community action.
- Develop a citywide campaign that involves all sectors of the community, using community-based social marketing tools.
- Build on existing efforts in the community.
- Engage the schools.
- Network with other communities and organizations that are already successfully engaging in local climate protection campaigns to learn from their programs and experience.
- Monitor progress and report the results.
- Establish a committee or other entity to coordinate action.

### *Provide City Leadership*

There are many opportunities for the City to reduce GHG emissions by improving the energy efficiency of its buildings and vehicle fleet, installing distributed energy systems to produce power, training staff to adopt more sustainable practices in the workplace, and reducing waste. By carrying out such actions and publicizing the results, the City can show that it is willing to do what it asks others to do.

It is difficult to conceive of an entity other than the City that could carry out a community—wide campaign. This plan does not suggest that the City be responsible for the entire effort, but it can act as an initiator, convenor, and leader. Ultimately, it will be necessary for people in each sector of the community to also play these roles.

### *Create a Citywide Campaign*

All sectors of the community—the City, businesses, institutions, and individuals—will have to participate in this effort if it is to succeed. To reduce GHG emissions, all stakeholders will have to examine the practices that affect energy use, transportation, land use, and waste management and make changes.

Burlington, Vermont offers one potential model for Cambridge to use in motivating the entire community to get involved. Burlington's 10 Percent Challenge campaign asks everyone to pledge to reduce their emissions by 10 % by 2005. The Alliance for Climate Action, a group of local stakeholder organizations, was formed to coordinate the campaign. The project includes a website on which people can report and track GHG reductions, assistance with identifying reduction opportunities, and a recognition program for participants.

Community-based social marketing provides a model that has had promising results in achieving actual behavior change. It uses the results of social science research to promote behavior change. This research indicates that in general, providing information to people by itself does not affect behavior. Personal contact is required. Careful identification of barriers and benefits to change is the first step in the process. The next step is to select appropriate tools.

*The tools, which are typically used in combination with one another, include:*

- Commitment
- Prompts
- Norms
- Communication
- Incentives
- Removing external barriers

Once a campaign is developed, it is tested; the results are evaluated before a large-scale campaign is launched. Monitoring results is a key part of every CBSM project.[1]

An individualized marketing program called, developed in Germany and based on similar principles, has successfully changed personal travel behavior through direct contact with households. The program which offers personalized travel information and incentives to use transit, walk, or bicycle, has had remarkable success in Europe and Australia.[2]

1. See Doug McKenzie-Mohr and William Smith, *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing* (Gabriola Island, BC, Canada: New Society Publishers, 1999) or www.cbsm.com.

2. See www.sustrans.co.uk.

### *Build on Existing Efforts*

A number of efforts already underway in Cambridge and the Greater Boston area can serve as the foundation for a community-wide climate protection campaign. These existing projects and activities offer an obvious way to establish and build partnerships and to link stakeholders across different sectors.

#### *Businesses*

Many Cambridge businesses have an interest in environmental sustainability. A number of new developments are using green building designs, which will be highly energy efficient. Companies such as Gravestar and Oaktree Development have made commitments to environmental responsibility as evidenced in their local projects. Gravestar follows a "green bible" of practices in its development projects. Oaktree has been an early adopter of the LEED green building standards. These businesses offer a model to other developers.

Businesses also have an inherent interest in energy efficiency. Efficiency upgrades reduce operating costs. While energy efficiency may not be the largest area of potential cost savings for some businesses, it is a cost-effective way for companies to demonstrate an environmental commitment. Companies such as Genzyme have undertaken extensive energy efficiency upgrades throughout their facilities.

Wainwright Bank, which has branches in Cambridge, has made social responsibility a centerpiece of its corporate philosophy. In partnership with Solar Boston, it offers a green loan package that provides a 1% lower interest rate than the standard home equity loan to finance solar installations.

As described in the plan's energy section, Cambridge Savings Bank and Source One have both received state grants to plan for fuel cell installations in Cambridge.

Many businesses and institutions are members of the Charles River Transportation Management Association, through which they fund and support programs to reduce single occupancy vehicle trips.

#### *The Universities*

Both Harvard and MIT have programs and projects involving facilities management, education, and research that are either working directly on climate change issues or in related areas.

Harvard launched its Green Campus Initiative to utilize its resources to build an environmentally sustainable institution. The initiative is staffed and has undertaken an inventory of the campus' GHG emissions and researched options for alternative fuel vehicles, environmental preferable product and

**Gravestar's "Green Bible"**

*Gravestar, the local developer and owner of the Porter Square Shopping Plaza, has adopted sustainable development goals for its properties. To achieve these goals, it developed the Gravestar Protocol, which it describes as "a comprehensive 'green bible' of principles, practices, techniques, and decision analysis steps used to ensure environmental sustainability in all of its projects. The Gravestar Protocol is an expanding reservoir of information and specifications that enables architects, engineers and subcontractors to plan and execute environmentally responsible building projects. Included in the protocols are planning and community involvement strategy, design considerations, and recommendations for execution and facilities management. Detailed site-specific protocols are generated from the large reservoir of environmental specifications."*

service procurement, energy efficiency opportunities, and use of organic food in dining halls. To carry out actions, a best practices exchange has been formed and an environmental loan fund has been established. The fund operates as a revolving account to support energy upgrades and other improvements in campus facilities.

At MIT, the Environmental Programs Task Force has been formed; it has worked on expanding the campus' recycling and environmental purchasing efforts. A Green Buildings Task Force is developing sustainable design guidelines for campus construction projects. MIT has adopted the U.S. Green Building Council's LEED Silver Standard with additional MIT-specific criteria as its interim performance goal. The Laboratory for Energy and Environment seeks to use its academic resources to make contributions to environmental sustainability. At the local level, MIT is collaborating with the Cambridge Public Schools to bring three high school and middle school teachers to campus to participate in research and develop environmental projects to take back to their classrooms, with the help of MIT graduate students.

***The Faith Community***

Many of the religious denominations in the United States have taken a position of concern about climate change and moral obligation for environmental stewardship. Some have undertaken action to express their faith.

The Massachusetts Episcopal Diocese has formed Massachusetts Interfaith Power and Light (MIPL) to foster energy efficiency and support renewable energy among places of worship. MIPL has engaged Conservation Services Group (CSG), an energy services company, to provide energy audit services to congregations, plan for conservation investments, facilitate utility conservation program payments, plan for the purchase of renewable energy, develop a discount heating oil program, and provide a heating and cooling system maintenance plan. CSG will provide similar services to individual congregation members. The program is open to the entire Massachusetts faith community.

The Committee on Environment and Jewish Life (COEJL) actively works to promote more sustainable practices in synagogues and among their members. The Greater Boston Chapter of COEJL sponsored "Eight Days, Eight Actions" in 2001, which urged members to take an energy saving action on each day of Hanukkah to save energy and slow global climate change. COEJL also sponsors Jewish Ecoteams (based on the Global Action Plan process); partnered with Solar Boston to bring technical assistance on solar energy projects to the Jewish community; joined the Green Building Coalition, which is advocating a state green building tax credit; and organized a campaign to urge President Bush to deal with climate change.

The U.S. Council of Catholic Bishops issued a statement on June 15, 2001 called "Global Climate Change: A Plea for Dialogue, Prudence, and the Common Good," which calls for immediate action to mitigate the effects of global climate change. The bishops approved the statement unanimously.

***Community Interest Groups***

Cambridge Climate Action is a citizen group that is part of the Massachusetts Climate Action Network (MCAN). In May 2000, CCA organized a forum with the Cambridge Center for Adult Education called "Climate Protection: What You and U.S. Cities Can Do," which about 140 people attended. The group has an obvious interest in the goals of this plan.

The Cambridge Tree Project works with the DPW Urban Forestry Program to promote and advocate on behalf of the city's tree resources. Efforts to maintain and expand the urban forest canopy are an important objective of this plan.

The Boston Solar Energy Association, a chapter of the Northeast Sustainable Energy Association, includes practitioners and advocates of solar energy, some living and working in Cambridge. It presents monthly lectures in Cambridge.

Many community groups have missions that are compatible with the plan. These include groups concerned with preserving particular places, neighborhood associations, and social action groups, among others.

### *Network with Other Communities and Organizations*

Currently 18 Massachusetts cities and towns belong to Cities for Climate Protection. Eleven are in Greater Boston. Staff from these communities have formed an ad hoc group that meets bi-monthly to share information and collaborate on projects.

ICLEI organizes national and regional meetings and maintains a listserve. Through the City's association with ICLEI, staff are able to communicate with local government staff in other parts of the country and learn about environmental initiatives. ICLEI is also organizing a "twinning" project to build relationships between local governments in developed and developing countries. Participation in this project would provide a way for Cambridge to magnify its climate protection work.

Numerous organizations and agencies in the Boston area are working on climate change, including the Massachusetts Energy Consumers Alliance, Union of Concerned Scientists, Conservation Law Foundation, Northeast States Coordinating for Air Use Management (NESCAUM), and the Metropolitan Area Planning Commission. These organizations can provide technical assistance and opportunities to partner.

### *Monitor Progress*

To sustain this effort, a program is needed to monitor trends in community-wide GHG emissions in the areas of energy, transportation, and waste. It is relatively easy to collect some community-wide data on an annual basis. *The following data could be collected:*

| Parameter | Source |
|---|---|
| Electricity Consumption | NSTAR |
| Natural Gas | NSTAR |
| Fuel Oil Consumption | City *(estimate based on DOE & CDD statistics)* |
| Vehicle Miles Traveled | Central Transportation Planning Staff & City |
| Waste Generated & Recycled | DPW |

In addition, it is important to compile the results of actions taken. A reporting format could be used based on forms ICLEI has developed for local governments. The City could serve as a repository for these reports.

With this information, the City could produce an annual report on trends and actions. The report would provide a way for stakeholders to put their actions into context and for the community to judge the effectiveness of the effort.

### *Establish a Coordinating Committee*

A standing committee, appointed by the City Manager or organized as a collaboration between the City and community stakeholders, will be important for carrying out the plan. A standing committee should include interested residents, people with technical expertise, and members of the business and institutional communities. The committee would provide a forum to discuss progress, advise on needed actions and changes in approach, assess progress, be a liaison with the community, and conduct outreach. Without such a committee, the effort would likely lose its focus.

While carrying out the plan will be the responsibility of every segment of the community, the City has a key role. It can provide information, incentives and rewards; convene groups; initiate projects; and, by reducing its own GHG emissions, serve as a role model.

This effort will require both staff and funds. Staffing requirements include staff to carry out community outreach and to monitor energy use and carry out energy efficiency projects related to City operations. These positions are likely to pay for themselves in direct and indirect savings to the City. Some funding for materials, for creating a campaign, and for special projects will also be needed.

## PROPOSED IMPLEMENTATION ACTIONS

### *Outreach to Businesses and Institutions*

- Develop a flyer for businesses listing the most important things they can do and distribute it widely. Feature brief descriptions of successful efforts by local businesses. Follow up with personal contact.
- Involve the largest employers by requesting voluntary pledges to take action through the EPA Energy Star Program or a local climate protection program. Develop technical assistance programs and information on financial assistance.
- Recognize local institutions' best practices on the City website and during Go Green Month.
- Work with NSTAR to develop effective outreach to businesses and institutions.
- Explore a City contract with an energy services company to facilitate services to commercial buildings.
- Develop a free or inexpensive consulting program for local businesses.
- Develop a pilot program focused on a representative block of small businesses to introduce more sustainable practices in waste management, energy efficiency, and transportation. The program would take advantage of opportunities for cooperation and economies of scale.

### *Outreach to City Departments*

- Form a permanent staff committee to develop policies and action priorities for the City and to coordinate work.
- Do outreach to citizen regulatory boards.
- Develop City government policies to guide purchasing decisions, construction practices, waste management, vehicle use, and other activities with the aim of reducing energy use, vehicle miles traveled and fuel consumption, and waste disposal.
- Develop a mechanism to inform City employees about climate protection activities and resources and a recognition program for outstanding employee efforts.
- Work with the public schools to incorporate environmental principles into the curriculum at all levels and to develop student projects that help carry out some of the actions in the plan.

**Green Teams Help Hoseholds**

*Several cities have sponsored "green teams" or "ecoteams" to encourage sustainable practices in households. Typically, a green team program involves joining a group of 5 or 6 neighborhood households; using a step-by-step workbook with a coach to review energy, water, waste, and transportation activities; and providing mutual support to reduce waste, inefficiency, and environmental impact. The effort has resulted in measurable progress.*

*Local governments that have funded programs include Kansas City, Missouri; Rockland County, New York; Philadelphia, Pennsylvania; Columbus, Ohio; and Madison, Wisconsin.*

*Santa Monica, California has invested $80,000 a year in a residential green team program and has started a business pilot program as well. The program has involved 124 teams and 840 individuals. The City reported the following results in 2001:*

***Green actions completed***
***23***

***Waste diverted***
***2420 lbs per person***

***Toxic household chemicals replaced or eliminated***
***4.5 per person***

***$CO_2$ emission reduction***
***2,777.6 lbs per person***

***Annual driving miles reduced***
***1,327 miles per person***

***Annual water savings***
***1,302 gallons per person***

***Outreach to Residents***

Investigate the possibility of sponsoring a green team project to engage residents in sustainable household practices. Santa Monica, California and Madison, Wisconsin have initiated such programs.

- Work with NSTAR to develop effective community awareness about energy conservation services.
- Develop displays and informational materials and take every opportunity to have a presence at community events.
- Celebrate resident efforts through a public recognition program.
- Create a comprehensive environmental citizens' guide that has both general guidelines and Cambridge-specific information (e.g., how to obtain energy services; where to buy Massachusetts-grown food, both at stores and at restaurants; where the nearest environmentally sound dry cleaners are; how to dispose of old appliances). The major focus should be on the most important actions. This could be circulated both in print and on the City website.